

## ABSTRACT OF THE DISCLOSURE

Embodiments of the present invention are directed to a method and apparatus for multiple battery cell management. In one embodiment, a solid state relay is used instead  
5 of a mechanical relay in a BMS. The SSR is smaller and faster than a mechanical relay, enabling smaller BMSs that more efficiently and safely manage battery cell charge. In another embodiment, a plurality of battery cells are connected to two rails, using four SSRs to control access to the battery cells. In one embodiment, a plurality of battery cells are grouped together and controlled as one module of a multi-module BMS. In one  
10 embodiment, each module has 10 battery cells in series. In one embodiment, the BMS controls 4 modules. In one embodiment, each module is controlled by control signals passing through logical gates. In another embodiment, each module is controlled by control signals passing through a programmed circuit.